

SPECIFICATION

TITLE

**“FREE-JET CENTRIFUGE FOR CLEANING THE LUBRICATING OIL OF AN
INTERNAL COMBUSTION ENGINE”**

BACKGROUND OF THE INVENTION

This invention relates to a free-jet centrifuge for cleaning the lubricating oil of an internal combustion engine, with a housing closed by a removable cover, with a rotor rotatably arranged in the housing and with channels for feeding the pressurized lubricating oil to be cleaned and for removing the cleaned pressureless lubricating oil, the rotor being of split design with, on the one hand, a drive part having at least one recoil nozzle and, on the other hand, a dirt trapping part having a dirt collection area, with the drive part able to be flowed through by a first partial lubricating oil flow and the dirt trapping part by a second partial lubricating oil flow, with the drive part and the dirt trapping part being designed with positive-interaction torque transmission means which are engageable by axially slipping on the dirt trapping part onto the drive part and disengageable by axially pulling off the dirt trapping part from the drive part, with the dirt trapping part being separable from the drive part for disposal or cleaning, and with means provided or applied in the centrifuge which, in centrifuge operation, serve to prevent or restrict the axial mobility of the dirt trapping part relative to the drive part and which are ineffective or detachable when the cover is removed.

A first free-jet centrifuge is known from DE 200 10 612 U1. With this centrifuge, the rotor housing comprises two parts which are detachably connectable with each other, the drive part comprising first connecting means and the dirt trapping part comprising second, corresponding connecting means. In a concrete embodiment, these connecting means consist of a bayonet lock which can be engaged and disengaged by the limited twisting of the two parts of the rotor against each other.

With this known free-jet centrifuge, it proved to be unfavorable that – for separating the dirt trapping part of the rotor from its drive part – the complete rotor must first be removed from the housing of the free-jet centrifuge and that the two parts of the rotor must then be twisted against each other by applying a certain torque which is required for releasing the bayonet lock. Since the rotor of the free-jet centrifuge in its operation will also be wetted by oil splashes on its outer surface, it is frequently difficult to manually apply the required torque for making and breaking the connection between the two rotor parts. This will require that – especially prior to a separation of the two rotor parts from each other – the exterior